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IS 9102-1 and 2 (1979): Rubber blankets for shrinkage range Part 1 Requirements for rubber blankets, Part 2: Recommendations for maintenance [TXD 21: Dyeing, Finishing and Allied Machinery and Accessories]

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Indian Standard

SPECIFICATION FOR RUBBER BLANKETS FOR SHRINKING RANGE

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Indian Standard

SPECIFICATION FOR RUBBER BLANKETS FOR SHRINKING RANGE

0. FOREWORD

0.1 This Indian Standard (Parts I and II) was adopted by the Indian Standards Institution on 13 February 1979, after the draft finalized by the Dyeing and Finishing Machinery Sectional Committee had been approved by the Textile Division Council.

0.2 Rubber blankets are used in textile finishing for pre-shrinking the cloth. It is normally used for shrinking light weight fabrics but can be used on twills, drills and other heavy fabrics if the shrinkage of the fabric is within the shrinkage capacity of the blanket.

0.3 The rubber blanket, if properly maintained, can be used to process 8 to 10 million metres of fabric. In case of finer fabrics like poplin the life is expected to be more as compared to the one used for coarse or heavy fabrics such as drill, denim, as there is considerable wear and tear on rubber blanket.

0.4 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test, shall be rounded off in accordance with IS : 2-1960*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

0.5 Recommended method for grinding, precautions to be observed during use and procedure for storage of rubber blankets are given in Part II of the standard.

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*Rules for rounding off numerical values (*revised*).

Indian Standard

SPECIFICATION FOR RUBBER BLANKETS FOR SHRINKING RANGE

PART I REQUIREMENTS FOR RUBBER BLANKETS

UDC 677·057·617 : 678·4-41

1. SCOPE

1.1 This standard (Part I) prescribes requirements of rubber blankets used in textile finishing for pre-shrinking the cloth.

2. MANUFACTURE

2.1 Material — A rubber blanket shall be wholly made of natural rubber free from foreign particles and shall be finished as per technical requirements for the pre-shrinking process.

2.2 Freedom from Defects — The surface of the rubber blanket shall be smooth, free from cracks, holes and any other defect on the surface. The surface layer should not peal off whilst in process. All the edges of the blanket should be slightly rounded to avoid tearing.

3. REQUIREMENTS

3.1 Dimensions — The width and thickness of rubber blanket shall be between 1 220 to 2 720 mm and 55 to 73 mm respectively. The inside circumference of blanket shall be 4 000 mm, *Min*.

3.1.1 The declared thickness and width of the blanket shall be subject to a tolerance of ±3 mm.

NOTE — The rubber blanket should be discarded when the thickness goes down to 30 mm as it will not give the desired results.

3.2 Hardness — The hardness of blanket shall be uniform throughout and shall be $35 \pm 3^\circ$ or $40 \pm 3^\circ$ Shore A as agreed between the buyer and the seller.

3.3 Heat Resistance — The blanket shall withstand temperature commensurating to the steam pressure of 3 kg/cm^2 in the drum.

4. DESIGNATION

4.1 Rubber blankets shall be designated as follows:

Width (mm) × Thickness (mm) × Inside circumference (mm) — Hardness (Shore A).

5. MARKING

5.1 Each blanket shall be marked with the name of the manufacturer, initials or trade-mark, if any.

5.1.1 The blankets may also be marked with the ISI Certification Mark.

Note—The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution (Certification Marks) Act and the Rules and Regulations made thereunder. The ISI Mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well-defined system of inspection, testing and quality control which is devised and supervised by ISI and operated by the producer. ISI marked products are also continuously checked by ISI for conformity to that standard as a further safeguard. Details of conditions under which a licence for the use of the ISI Certification Mark may be granted to manufacturers or processors, may be obtained from the Indian Standards Institution.

6. PACKING

6.1 The blanket shall be packed in a wooden case made of 25 mm thick planks. Blanket shall be wrapped with corrugated paper or flannel to avoid damage. While packing the blanket, care should be taken that no nails or pointed articles are protruding inside the package. It is desirable to pack the blanket on its side in a circular packing.

Indian Standard

SPECIFICATION FOR RUBBER BLANKETS FOR SHRINKING RANGE

PART II RECOMMENDATIONS FOR MAINTENANCE

UDC 677·057·617·004·5 : 678·4-41

1. SCOPE

1.1 This standard (Part II) prescribes recommended method for grinding, precautions to be observed during use and procedure for storage of rubber blankets for shrinking range for attaining optimum life.

2. METHOD FOR GRINDING

2.1 If the compressive shrinking range is in operation for 24 hours every day, it is recommended that the blanket be reground every week or say, after processing of every 1 million metres of cloth. Where the use is intermittent, regrinding should be done after every 120 hours operation. The actual depth of the rubber removed in grinding need not exceed 0·5 to 1 mm but grinding should be continued until a fresh lively surface is obtained. Although grinding inevitably reduces the thickness of the blanket, it prolongs the life of the blanket by removing minor defects before these develop into serious ones. During the grinding operation particular care should be taken to avoid undue pressure and friction. Excessive frictional heat will cause the surface of the blanket to become sticky. Talcum or soap stone powder should be frequently sprayed on the surface during grinding to avoid generation of heat.

3. PRECAUTIONS

3.1 Do not allow blanket surface to come in contact with floor, crates or equipment.

3.2 Do not handle blanket with chains, cables, hooks or small diameter bars when installing, removing or crating.

3.3 Do not apply steam to drum until water cooler lines have been turned on and blanket is moving.

3.4 Do not increase tension on the blanket beyond the minimum required to eliminate slippage.

3.5 Do not compress blanket more than 30 percent of its thickness.

3.6 Do not use live steam in the skyer heavily sized fabrics.

3.7 Do not release blanket tension at shut down.

3.8 When the machine is not in use, the blanket should not be kept in contact with hot surface partially, that is the machine should not be stopped even for a little while when the cylinder is hot.

3.9 It is extremely important to use a correct doctor blade for collecting the water throughout the width of blanket to prevent cracking due to excessive heat. The water used for cooling the blanket should be of room temperature and free from dirt. In absence of above, the portion of blanket which does not come in contact with cloth starts cracking early.

3.10 Always release nip pressure when machine is not in use.

3.11 It is advisable to use minimum steam pressure in order to have better life of the rubber blanket. Excessive steam pressure reduces life of rubber blanket and increases necessity of frequent grinding. Pressure roll adjustment should be re-set after each grinding.

4. STORAGE

4.1 The rubber blanket should be carefully removed from its case and should be kept on edge in upright cylindrical form. If the blanket has been in the case for a considerable length of time, it may be necessary to use spool or large diameter pipe to obtain the circle or cylinder form. If this is necessary, the ends of the object used to form the circle should be carefully wrapped with a soft fabric to prevent damage to the inner surface of the blanket. The blanket should be thoroughly dusted with the fine talcum powder to pressure the surface. The blanket should be stored in a cool dark moist place away from any high voltage power lines to prevent oxidation of the rubber surface. The blanket should be covered with thick brown cloth to minimize the risk of damage.

INDIAN STANDARDS
ON
DYEING AND FINISHING MACHINERY

IS:

4893-1968	Perforated stainless steel cones for wet processing
7688-1975	Definition of side (left or right) of dyeing and finishing machines
7951-1976	Beams for dyeing fibres, yarns and fabrics
7952-1976	Nominal widths of textile finishing machines for treatment of textile fabrics in open width
8014-1976	Classification and nomenclature of dyeing and finishing machinery
8304-1977	Wooden winding rollers for textile finishing machines
8333-1977	Perforated cylindrical tubes for cheese dyeing